

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

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Cont

1. (Currently Amended) An image sensing apparatus having a plurality of unit cells arranged in two dimensions, each unit cell including a plurality of photoelectric conversion elements and a common circuit shared by and arranged between said plurality of photoelectric conversion elements included in the same unit cell that the common circuit belongs to,

wherein said common circuit processes signals from said plurality of photoelectric conversion elements and outputs the processed signals to an output line, arranged in either one or two dimensions, and

wherein a first distance between a center of mass of photo-receiving areas of adjoining photoelectric conversion elements included in a given unit cell is substantially equal to ~~distances~~ a second distance between the center of mass of the photo-receiving areas of the adjoining photoelectric conversion elements included in different unit cells ~~at least in one direction~~, and a third distance between a center of mass of the photo-receiving area of a photoelectric conversion element included in the given unit cell and the center of mass of the photo-receiving area of the adjoining photoelectric conversion element included in an adjoining unit cell.

2. (Original) The image sensing apparatus according to claim 1, wherein said plurality of photoelectric conversion elements in each unit cell are arranged side by side in one direction, and said common circuit is arranged at the edge of each plurality of photoelectric conversion elements.

3. (Original) The image sensing apparatus according to claim 1, wherein said plurality of photoelectric conversion elements in each unit cell are arranged side by side in one direction, and said common circuit is arranged between adjoining unit cells arranged in a direction perpendicular to the direction of the arrangement of said plurality of photoelectric conversion elements.

4. (Original) The image sensing apparatus according to claim 1, wherein said common circuit is arranged at the edge of each plurality of photoelectric conversion elements arranged in a horizontal direction.

5. (Original) The image sensing apparatus according to claim 4, wherein said unit cell is configured with a plurality of pixels each including a photoelectric conversion element, and a number of horizontal conductors passing over each pixel is the same.

6. (Original) The image sensing apparatus according to claim 4, wherein said unit cell is configured with a plurality of pixels each including a photoelectric conversion element, and contacts between layers of each pixel are arranged so that a

number of conductors passing over each unit cell, as well as one of the contacts which is not connected to a conductor passing over the unit cell is connected to a light-shield film of the pixel.

7. (Original) The image sensing apparatus according to claim 1, wherein said common circuit is arranged at the edge of each plurality of photoelectric conversion elements arranged in a vertical direction.

8. (Original) The image sensing apparatus according to claim 7, wherein said unit cell is configured with a plurality of pixels each including a photoelectric conversion element, and a number of vertical conductors passing over each pixel is the same.

9. (Original) The image sensing apparatus according to claim 7, wherein said unit cell is configured with a plurality of pixels each including a photoelectric conversion element, and contacts between layers of each pixel are arranged so that a number of conductors passing over each unit cell, as well as one of the contacts which is not connected to a conductor passing over the unit cell is connected to a light-shield film of the pixel.

10. (Original) The image sensing apparatus according to claim 1, further comprising:

noise reading means for reading a noise of said common circuit;

first signal reading means for reading a first signal through said common circuit;

second signal reading means for reading a second signal through said common circuit; and

noise reduction means for reducing the noise from said first and second signals.

11. (Original) The image sensing apparatus according to claim 10, wherein said noise reduction means is differential means.

12. (Original) The image sensing apparatus according to claim 10, wherein said first signal is read from one of said plurality of photoelectric conversion elements in each unit cell, and said second signal is read from another photoelectric conversion element in the same unit cell.

13. (Previously Presented) The image sensing apparatus according to claim 10, wherein said first signal is read from one of said plurality of photoelectric conversion elements in each unit cell, and said second signal is read from a photoelectric conversion element and another photoelectric conversion element in the same unit cell.

14. (Original) The image sensing apparatus according to claim 1, further comprising:

noise reading means for reading a noise of said common circuit;

signal reading means for reading a plurality of signals through said common circuit; and

noise reduction means for reducing the noise from said plurality of signals.

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Circuit

15. (Original) The image sensing apparatus according to claim 14, wherein said noise reduction means is differential means.

16. (Original) The image sensing apparatus according to claim 14, wherein said first signal is read from one of said plurality of photoelectric conversion elements in each unit cell, and said second signal is read from other plural photoelectric conversion elements in the same unit cell.

17. (Original) The image sensing apparatus according to claim 1, wherein said common circuit is an amplifier for amplifying and outputting a signal from each of said plurality of photoelectric conversion element.

18. (Original) The image sensing apparatus according to claim 17, wherein said common circuit further includes transfer means for transferring the signal from each of said plurality of photoelectric conversion element and reset means for resetting said common circuit.

19. (Original) The image sensing apparatus according to claim 1, wherein said common circuit is digital signal conversion means for converting a signal from each of said plurality of photoelectric conversion element into a digital signal.

20.-82. (Canceled)

83. (Currently Amended) The image sensing apparatus according to claim 1, further comprising:

a lens unit that projects incoming light onto said unit cells;

a signal processing circuit that processes a signal outputted from said

unit cells; and

a control circuit that controls overall operation of the image sensing

appartus apparatus.
